

875—91.8(89) Plugging boiler tubes. This rule does not apply to tubes in headers of economizers, evaporators, superheaters, or reheaters.

91.8(1) General requirements.

- a. Leaky tubes shall be replaced or plugged.
- b. Tube plugs shall be made of a material which is compatible with the material of the boiler tube being plugged and shall be welded into place or manufactured to be expanded into the tube sheet or drum.
- c. All plugged boiler tubes shall be replaced prior to the next required certificate inspection.
- d. The maximum number of tubes that shall be plugged is the lesser of the number specified by the OEM or the number specified by an engineer experienced in boiler design. Documentation of the maximum number of tubes that may be plugged as determined by the OEM or engineer shall be kept on site, and a copy shall be mailed to the division of labor services.

91.8(2) Fire tube boilers. In a fire tube boiler, a tube that is adjacent to a plugged tube shall not be plugged.

91.8(3) Water tube boilers, unfired boilers, or process steam generators. To determine the maximum number of tubes that may be plugged in a water tube boiler, unfired boiler, or process steam generator, an engineer experienced in boiler design shall consider the operational effect on the water side pressure boundary or membrane and the effect on the combustion process throughout the boiler. Water wall tubes may not be plugged if the tubes form a separation wall between products of combustion and the outside atmosphere or a separation of the gas passes in a multiple gas pass boiler.

[ARC 5977C, IAB 10/20/21, effective 11/24/21]